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VIII.—*Notes on a Journey from Kaisaríyah, by Malatíyah, to Bir or Birehjik, in May and June, 1839.* By W. AINSWORTH, Esq., in charge of an Expedition to Kurdistán.

HAVING completed our astronomical labours at Kaisaríyah, we took our departure, on the 9th May, up the course of the river of Sárimshák (Garlick) in a direction N. 60° E., passing first a Mohammedan ruin, and then Girlamik and Khurmá-lí, poor villages in glens of volcanic tufa. At 6 miles, there was a small lake, covered with *Alisma plantago* in flower, and numerous specimens of *Fulica atra*. About 13 miles from Kaisaríyah we crossed the Sárimshák, on a bridge where it was 6 yards wide by 2 feet in depth, and flowed from E.S.E. to W. by S. From hence we commenced a long ascent till we came upon a large open valley, with a salt lake at its northern extremity. There were two villages on this plain, Túz Hisár (Salt Castle) and Palás; at which last we stopped the night. To the S. was also an old khán and village, called Sultán Khán (Sultan's Inn). The salt lake of Palás is about 3 miles in length by one in width; but in summer, is nearly dried up. It is said to be farmed for 40,000 piastres, or 400*l.* annually. Forty piastres are paid for a cart-load of salt, and ten for that of a camel or bullock. Gypsum is quarried here and at Sárimshák, and taken to Kaisaríyah in order to be burnt for whitening.

10th.—Crossing the plain we ascended hills of sandstone and gypsum, which we now also observed forming high hills and cliffs along the valley of the Kizil Irmák to our left. At about 8 miles, we crossed hills of basanite, Arjish bearing S. 44° W.; and then turning to the eastward, arrived at Gelermek, a post-village, built on the side of the hill, and containing 200 houses of Armenians, and only 70 of Mohammedans. A marshy plain extended before us, with a gradual rise to the W., bounded by the snow-clad Khanzír Tágh (Wild Boar Mount), bearing S. 32° E., and to the N. by hills of red sandstone, named Sárichík (Yellowish), and Shema' Tágh (Mount Flambeau). Having changed horses, we travelled 3 hours further, to a small Armenian village, of 26 Armenian and 5 Mohammedan houses, called Insánlí, secluded amid cliffs of gypsum. The approximate elevation of this spot was 3980 feet; and the sedimentary formations extending between this and the Kizil Irmák, and forming a band of about 5 miles in thickness, averaged upwards of 4000 feet in elevation; the snow-covered Khanzír Tágh, extending all along our southern horizon, probably attains an elevation of 5000 feet. Arjish bore S. 48° W. by compass.

11th.—Continuing about an hour along the upland, we found it closed up by a hill, with a pond at its base, beyond which was the

village of Kayá Buñár (Rock Spring), and below an extensive fertile plain crowded with villages, and watered by many rivulets, the largest of which was the Yának Chái (Burnt Brook). Passing marshes and rivulets, we came to the village of Chaushun, or Jevshen, and thence arrived at Shár-Kishlá, where we intended (as it was the residence of a governor, and a post village) to change our direction, and proceed, if possible, at once to Víráñ Shehr, which we expected to find in this neighbourhood. This, however, led to a very long and angry discussion, the governor endeavouring to evade giving us horses off the great road by every means in his power; and we finally succeeded only in getting them to the village of Abásil-lí, situated on the mountains to the S. The waters of the valley of Shár-Kishlá all unite at the same pass, at Topásh, a village and ferry on the Kizil Irmák.

It rained hard on leaving Shár-Kishlá. Our road lay in a S.E. direction, up the course of the Yának Chái; and in about an hour's time we left the plain to enter among low hills of limestone, along which we continued 3 hours to the village of Abásil-lí, at an elevation of 4680 feet, and near the head of the waters flowing north-westerly to the Kizil Irmák.

12th.—We started early in the morning for the ruins of Víráñ Shehr. They were said to exist in a wild and rocky district, in which there were no villages, and only wandering Kurds of very bad repute. Our road lay at first S. 30° E., then S. up a ridge lying between Abásil-lí and the plain of Kayá Buñár. This range, called Yel Gadugí, rises about 700 feet above Abásil-lí, or 5400 feet above the sea. Its direction is nearly due E. and W. There were many patches of snow along the coast; and the waters on the northern declivities flow to the Kizil Irmák, and from the southern to the Saïhún, the ancient Sarus, or river of Adanah.

Having gained the crest of the Yel Gadugí, an extensive plain of chalk was observed stretching before us, about 15 to 20 miles in length, by 10 in width. From the elevation at which we stood, this plain appeared almost as an uniform level, but when travelled over presented slight undulations; and was cut, by the tributaries of the Saïhún, into ravines, with nearly perpendicular cliffs, or steep declivities, varying from 100 to 200 feet in depth. This plain was bounded to the S. by a range of mountains, now snow-covered, and stretching from E. to W., named the Gók Dil-lí; to the S.W. by a spur of the 'Alí Tágh; to the W. and N.W. by the Khanzír Tágh; to the N. by the Yel Gadugí; and to the E. by the prolongation of the same, and the Kará Tónúz Tágh (Black-Boar Mount), stretching towards Kará Buñár and the easterly source of the Saïhún.

Descending the Yel Gadugí, and passing by a tepéh with

ruins, called Kúshák-lí U'yúk, we crossed a rivulet 3 yards wide by 2 feet in depth, flowing from E.N.E. to W.S.W., and said to rise 3 hours' distance at a ruin called Cheralik. This stream, called Bázár Sú, is crossed by a one-arched bridge; and 5 minutes before it, to our right, were the ruins of a village called Bázár-yerí, ruined by the Kurds, who have long since arrogated these districts to themselves, and expelled all quietly-disposed inhabitants.

We now began to ascend a short distance, and gained the level of the chalk upland, which we continued traversing for 2 hours, in a direction S. 19° E., when we arrived at the junction of two ravines: one short, from the N.E.; the other long, and containing a stream called Táshlí Gókcheh, 3 yards wide by 1 foot deep, but narrowing below, in marshy ground, to 1 yard in width by 4 feet deep. This stream has one of its sources, it is said, at Kará Bunár, distant from 4 to 5 hours' easterly; and others at a Yáilá called Kaftánjí, 3 hours' distance; and is one of the chief sources of the Saïhún, according to every account we could obtain from various authorities. We crossed it by a bridge of one arch, and continued our road down its banks, winding from S.W. to W. This is an important point to establish in the hydrography of this part of Asia Minor, because it is evident, that if we had traced up the waters of the Kizil Irmák to their head, and, passing them, had come upon tributaries to the Saïhún, no river or rivulet that is tributary to the Euphrates can possibly exist to the W. of this, or between Kará Bunár and Arjish Tágh.

After about an hour's ride, we came to where a large stream of very clear water joined the Táshlí Gókcheh from the S. This was said to be the river of Víráñ Shehr, and we turned up its banks. The river was 7 yards wide, by 2 or 3 feet in depth, remarkably full of fish, which, apparently from being long undisturbed, had in many cases attained a very large size. The united streams flowed through a glen N. 20° W. We had not pursued our way long up this river, when we came to the ruins of which we were in search, and which we found to consist of an almost square space, pointing nearly to the four points of the compass, traversed by the river, flowing here N. and S., and encompassed by a wall, which extended further on the W. side of the river than on the E., on which side it was also in a more ruinous condition than to the W. The wall, generally about 7 feet in breadth, was defended by several square towers; and was still, although in a ruinous condition, in many places upwards of 20 feet in height. There were also four gateways, corresponding nearly to the four cardinal points. The architecture of the place, the character of the walls and towers, and the newness of the mortar, at once satisfied us that this was not a Roman or a Byzantine relic,

but the ruins of a Saracenic fort, erected for the defence of the road, as we learn from Idrísi (p. 239), which shows this site to correspond with Shohaïr (Little City), placed by Rennell at 57 geographical miles from Kāisarīyah, and 18 from Tonosa. The interior space was the most part rocky, and presented no ruins, except of one or two insignificant buildings, and of a bridge that had been constructed with hewn stones. There was also a similar one in a glen, a little below; and there were some ruins of little interest upon a hill, $\frac{1}{4}$ of a mile N. 75° E. This station, formerly traversed by a great road, had still a horse path carried through it, now little frequented on account of its being unprotected. The river is said to have its origin from a limestone cavern, 2 hours to the S., a circumstance which is rendered highly probable by its crystalline clearness. There are also several fine springs flowing into it, from the rocks in the interior of the fort. It rained during the greater part of the day, with a cold northerly wind; but we were able to return to Abásil-lí late in the evening, without having suffered any interruption or annoyance, except from the weather.

13th.—We left Abásil-lí, pursuing our way in a north-easterly direction, along the northern foot of the Yel Gadugí, and thence down a ravine of sandstone to Góz O'ghlán, a small village of twenty houses, where we entered upon the plain of Túnúz, 280 feet below Abásil-lí, the waters from which are tributary to the Kizil Irmák. Túnúz, the ancient Tonosa, although formerly a place of some importance, as the point of union of the two roads from Castabala, Comana, and Arabissus, as well as the point of separation of those to Sebaste and Nicopolis, has not a single remnant of antiquity to boast of. It is still a post-village, 7 hours from Deliklí Tásh, contains about sixty houses, and a mesjid with a minaret. The governor of Túnúz is a Turkomán, residing near Yúz-Kát. The taxes are collected, as in many other places, under the flattering falsehood of their being devoted to the support of the sacred temple at Mecca. Sheep and goats are generally sent hence to Aleppo, or, as they expressed it, to 'Arabistán.

14th.—Quitting Túnúz, we proceeded through the hills of Kará Túnúz by the pass called Ebijík Bógház. Having gained the crest, we found the waters all flowing southwards. They were now tributaries of the Tokhmah Sú. Upon this basanitic upland was an extensive oblong space, with the ruins of a wall now level with the ground, and a rivulet flowing through the centre, called Kurkli Yerdi, and very like the remnants of one of the stations on Idrísi's road. To the S.W. was a conical basanite hill, with a ruin called Kará Ziyárat (Black Sanctuary). We now descended by a long valley, crossing a double rivulet by two bridges, and then ascended again upon an extensive chalk plain.

To our left was a high group of hills called Teger; to our right a lower group, formed of indurated limestone in curved strata, and called Kó-i-Músh. Leaving this plain, we entered upon a valley bordered by cliffs of basanite, with a ruined castle, named Kará-sákí. It was late in the evening when we arrived at Manjú-lík, an Armenian village of fifty houses, with an assumed appearance of poverty, but much real comfort, and probably some agricultural wealth, where there is also a good church.

15th.—We left Manjú-lík by a glen of basanite, in a S.E. direction, which led us upon a plateau of the same rock. To the S.W. was a low district of red sandstone. After about an hour's ride, we gained a valley with a rivulet tributary to the Báliklú Sú (Fishy Water). Before us was a stony chain of limestone hills, which we soon entered by the pass called Sakál Tútán (Beard-stroker), from its requiring patience and resolution to get through it, a man's stroking his beard being expressive of these qualifications among Asiatics. The road wound from S. to S.W., which is also the general direction of the valley. We continued along a narrow ravine for about 5 miles, when the pass suddenly expanded, and was backed by another range of limestone hills, the ruins of a fort being also observable upon a nearly isolated summit to the left. This secluded and rocky district is called Baghrán. We now began to ascend the next range, amid patches of snow and an early but brilliant spring vegetation, consisting of sweet-scented hyacinths, blue anemones, white and yellow squills, and a few ranunculuses and red tulips. These flowers sometimes almost carpeted the rocks, and contrasted brightly with the stony sterility around, where steep and barren cliffs were thrown into deep relief by a clear sunshine, and their shadows darkened by long ridges of snow.

We descended on the other side still over a rocky country, travelling 2 hours till we came to a narrow ravine in chalk and fissile limestone, with flinty slate, but without organic remains, at the end of which we reached the valley of the Tokhmah Sú, with the gardens and picturesque town of Gurun before us.

16th.—Gurun, in lat. $38^{\circ} 42' 10''$, is situated on the southern bank of the river, about 15 miles from its sources, and at an altitude of 3906 feet above the sea. Its position is in a narrow glen of fissile limestone, from 400 to 500 feet deep. The gardens below the town, dispersed along the river's banks, afford much relief from the dreary stony wastes and rocky ridges by which the town is approached on almost every side. To the N. there is a divergent glen, up which the houses are carried for some distance. This glen terminates, on the south-eastern extremity, in a rude cliff of limestone, perforated by numerous caves, which the falling down of the shingly rock have rendered no longer habit-

able. On the top of the cliff, are the remains of an irregular castellated building, of which one face has fallen with the cliff; other two sides meet at an acute angle, and are defended by round and square towers of rude construction. The whole is built of slaty limestone put together without mortar, and with little art; and if the edifice occupies the site of an ancient building, it does not itself belong either to a remote epoch, or to a people among whom the arts were in much regard. It was in vain, also, that we sought over other parts of the town for remains of antiquity. The famous city of Commana, wherein was a temple of Bellona, with an establishment of 6000 persons, cannot evidently be sought for at Gurun. It is more likely to be the site of Arabissus, 78 m.p. from Sebaste. Gurun is 52 g.m., 74 m.p., from Arcas, Commana 49 g.m. and 28 m. p. from Tonosa.

The houses of Gurun, although of less pretensions than even those of the small towns of Nev-Shehr or Injeh Sú, are whitewashed and clean; and there is much appearance of comfort and prosperity. Its merchants trade with Aleppo, Mar'ash, Sívás and Constantinople. Gurun has now, with Derendah, replaced Al-Bostán, which, rendered insecure by its mountain position on a frontier line, has dwindled down to a mere village. The taxes of Gurun belong to the Haramein, the two sacred mosques at Mecca and Medinah.

17th.—Mr. Russell and I made an excursion to the sources of the Tokhmah Sú. This river enters Gurun, by a northerly curve, through a deep and narrow glen in limestone, called the Toprák Virán (Desert Soil), beyond which it is named the Injeh Sú (Narrow River). This glen being impassable, we gained the Injeh Sú by crossing a rocky ridge of hills called Khurkhun, with small patches of snow, and spring flowers, by a path remarkably stony. From a commanding position hence, we observed the valley of the Injeh Sú, extending S.W. to the fort of the Gók Dil-lí hills, the most northerly of which bore N. 80° W. Between the Gók Dil-lí (the other slope of which we had visited on our excursion to Virán Shehr) and the Baghrán hills to our right, and which we had crossed over on coming to Gurun, were the Súngerlú Tágh, also a low range of limestone hills, stretching 15 miles from S. 70° W. to N. 80° E., 5 miles off. Kará Bunár lay immediately over a line of low hills that united the Gók Dil-lí with the Súngerlú hills, N. 52° W.

On the west side of the glen, the Injeh Sú received many tributaries: one from some Kurdish tents (Kízil Virán), 1½ hour N. 60° E.; and several small rivulets from a district of basanite, which we passed over on descending the hills to gain the river's bank. We crossed it by a bridge, where it was 6 yards wide by 2 feet deep; and then ascended to Injeh Sú Kóji, a mere farm,

where nearly one-half of the stream is supplied from a glen bearing N.W. by W. The main branch still continued a tolerable rivulet one hour further up to the village of Kópek Víráñ (Dog Desert). There were also other small tributaries: one from Tágh-terah (Mountain-skirt), W. of Kópek Víráñ; another from Bel Buñár, in the Gók Dil-lí. We returned the same day to Gurun.

18th.—Leaving Gurun, we proceeded to the eastward along the northern bank of the Tokhmah Sú, which is bordered by chalky cliffs 300 feet high. A mile below, was the village of Khuzin, of sixty houses of Mohammedans, with gardens along the banks of the river, from the sudden rise of which they appear to suffer much. Numerous grottoes exist on the cliffs above. A mile beyond is a small waterfall over basanite; and a little further on, the river receives a considerable tributary from the S., which is said to issue from a limestone rock only 3 miles from its junction. This subterranean stream, with the not uncommon name of Gók Buñár (Heaven Spring), is renowned for a fish which has only one bone, and is sacred to 'Alí. Up the same valley, is the village of Tanil; and immediately below, the Tokhmah Sú forces its way through a steep and rocky pass of basanite, above which, to the S., there is a curious isolated mass of the same substance, looking like a castellated building, and called Tanil rock.

We descended hence to the large village of Tanil, with sixty or seventy houses of Mohammedans, beyond which the valley opens, and the Tokhmah Sú receives another tributary called Sách Aghz (Hair-mouth), which flows through lofty limestone cliffs to the N. On the right bank, and at the foot of a rather remarkable hill, is the village of Tokhmah, whence the river receives its name. Half a mile below this, we crossed the river over a bridge of one arch. It is here, after receiving the Gók Buñár and the Sách Aghz, 16 yards in width by 18 inches in depth, but is much lower in summer. A little below it enters into a glen of limestone, dipping E. The road hence turns to the S., but joins it again between a ravine and a village called O'rtah Kóí (Mid-village), and a recess on the N. side called Sári Kayá (Yellow Rock). Beyond this, the river losing itself amidst lofty and inaccessible cliffs, the road is carried over limestone hills, in a S.S.E. direction, to the valley of Derendah; while the river itself—passing by Dereh-jik (Little Valley), with perpendicular chasms, and a cliff nearly isolated in the midst of the stream—washes the walls of a first portion of the town, containing a few gardens, and two tall minarets, and then pouring itself into a dark and narrow ravine, isolates the castle-rock from the opposite precipices, and then issues forth from its narrow chasm to water several miles of

gardens and country houses, which form the summer residences of the inhabitants.

19th.—The rock upon which the castle of Derendah is situated is nummulitic limestone, forming cliffs of from 50 to 100 feet in height, and rising 300 feet above the river's bed. The castle is only approachable in one direction, which is defended first by a gateway of modern construction and Saracenic style, with an inscription which was so high as not to be legible by Mr. Rassám. Then at a distance of 223 feet up a winding road, there is another portal of a similar character; and 261 feet further ascent brought us to the top of the rocks, with a ruined bastion to our left.

The northerly point of the rock is defended by two walls, and there is a hewn staircase leading down to the waterside defended by another wall. There are also many hewn cisterns for preserving rain water. The southerly point is defended by a curtain 30 feet in width, with two lateral round towers; beyond them is a smaller square tower, where the rock is scarcely 20 feet in width. There are also some other minor defences all ruinous; but the cliff is in general so steep, and the asperity of the rock so great, as to require no outworks. The extent of the rock from the northern to the southern wall is 662 yards, the width various, but it does not exceed 150 yards. Upon the platform there are about forty houses. All these ruins by their style, the appearance of the mortar, and of the wood used in their construction, do not date beyond the epoch of the Turks, nor did we perceive any remains which we could determine as belonging to an ancient period, although Derendah, from its remarkable position, has all the appearance of having been one of the many Roman or Byzantine sites which existed in Armenia Minor and Melitene, a province of Cappadocia.

The town of Derendah, like Gurun and Malátîyah, is abandoned in summer-time, the inhabitants retiring to the gardens lower down the valley, and this gives to both towns an appearance of population far exceeding the reality. At Gurun, at an elevation of 918 feet above Derendah, the inhabitants had not yet left the town, but here they had quitted it a fortnight earlier, and to us a great and almost incredible inconvenience resulted from this, as all the cloacas had been opened upon the streets, and the walk to and from the castle was rendered by this circumstance a more sickening business than can be possibly imagined.

In the warm valley of Derendah we collected about 200 species of plants already in flower, most of them familiar friends, belonging to the genera *Thlaspi*, *Cynoglossum*, *Sinapi*, *Papaver*, *Ranunculus*, &c., and only interesting to geographical botany. The Tokhmah Sú is here very rapid, and flows at a rate of about $\frac{2}{3}$ of a mile an hour. Lat. by mer. alt. of \odot and by α Polaris $38^{\circ} 33' N.$

20th.—Leaving Derendah in a S.S.E. direction, we crossed a hill and descended into 'A'shik Dereh-sí (Lover's Valley), more beautifully wooded even than that of the Tokhmah Sú, and crowded with country houses. In the centre is a rapid rivulet, 5 yards wide by 2 feet deep, which we crossed on a bridge, ascending hills of gypsum, along which we continued to the village of Shábuk; the valley of the Tokhmah Sú was always visible on our left hand, and that river was joined, 3 miles below Derendah, by Báliklú Sú, the river of Manjú-lik, &c., and the most remote source of the river. Our road then lay more to the S.E., over a low, undulating country of marl and gypsum, in part cultivated, and bounded to the S. by lofty hills of indurated limestone. Passing the village of Yenijah, also with summer habitations, we ascended hills of red and brown sandstone, succeeded by marl and shelly limestone, from which I made a large collection of turritellæ, cones, &c. &c. The country beyond the valley consisted of long ranges of conical hills and steep platforms, which were composed of basanite and trap rocks.

We commenced our ascent of these mountains at the village of Setrek. They are all together called Bel-lí Gedik, but many of the different summits, which have the appearance of having been rude hill-forts, have distinct names, as Chichak-lí, Kará Kayik, Kilisá Kal'ah-sí, Sárichí chák, &c. The crest of these mountains we found, after about 2 hours' ascent, to be at an elevation of 5625 feet, and we enjoyed from thence a fine prospect of the hills of Al Bostán and the mountain chains along the Jaihán (Pyramus). From hence we descended to the encampment of the Kurdish tribe of Bekr U'shághí, and having announced that we came to place ourselves under their protection, we pitched our tent in the valley below.

21st.—We travelled to the eastward still over a trap country, occupying the foot of the Akjah Tágh. Shortly after mounting, we met a Kurdish chief on his road to Bostán, with family and attendants. His two wives rode before him; both were well-looking, fat women; their faces were uncovered, they rode astride, and remarkably upright, with an air of dignity as if they had been the mothers of heroes. Crossing some limestone hills, where I obtained another collection of fossil shells, we passed Jafalí, a small village in the head-glen of the Aghjah Tágh, then made a long ascent up a partly cultivated country, and traversing a ridge of limestone with a large cave, descended by a ruined khán into a wide and picturesque valley, bounded by steep limestone cliffs, and the furthermost point east that belonged to the Akjah Tágh Kurds. These mountaineers had for many years rendered this road totally impassable, but attacked in all their strongholds,

and besieged in their castle of Kurnak, 4 miles to the N. of us, by the troops of Háfiz Páshá, they were completely reduced, till the unfortunate affair of Nizib, when they rose again to a man, to revenge their partly imaginary wrongs. It took us 3 hours to cross this extensive vale, abounding in Kurd villages, and during which we passed several ruined kháns, and an old bridge over the central rivulet, showing much former communication. After another rocky ascent, the great plain of Malátíyah was seen to extend before us, and descending amidst dwarf oaks with flowering epipactis, we reached 'Arká, the ancient Arcas, built on a mound, like most antique sites, yet having few remains of ancient times to boast of.

22nd.—From 'Arká to Malátíyah, or indeed to the Euphrates, is one continued plain, extending along the foot of the Báglí-Khánlí Tágh (Garden Inn Mount), and lowering gradually towards the Tokhmah Sú, and thence towards the Euphrates, the lowest axis of the plain being naturally below the junction of the two rivers. Three miles from 'Arká we passed the Sultán Sú, 5 yards wide by 2 feet deep, a tributary to the Tokhmah Sú. The plain is entirely formed of limestone-conglomerate with pebbles of various sizes, and is covered with flowering plants, which give it a very gay appearance. It was remarkable at this altitude how many of these flowers were common also to England. The individuals, and perhaps even the species, over the same space, were more numerous than in our most flowery meadows, and some difference of localities presented themselves, for plants of shadowy hedge-sides, as *Vinca minor*, and plants of warm, stony acclivities were here intermingled with the vegetation of plains and meadows. Passing a large and abundant spring, we came to the deep valley of the Shakmah Sú, which we crossed upon a bridge with an elliptic arch, a rare form in this country; and after 2 hours' ride along gardens and vineyards, obtained permission to pitch our tent in one of the most shady and retired of the former, in the village or town of Aspúzí, which is the summer residence of the people of Malátíyah, and 2 hours, or 6 miles distant south of that place.

23rd.—A great deal of misrepresentation has appeared concerning the summer and winter towns of Malátíyah. Malátíyah itself is a small town of about 200 houses, situated upon a plain, and watered by a rivulet which is a tributary to the Tokhmah Sú, but from which it is at a distance to the S. of at least 5 miles. There is little or no wood near the town, which is consequently exposed to all the violence of the sun's rays in summer. There are remains of the old walls of Melitene and of its gateways, as well also of a castellated building; but all are in a very ruinous condition. Formerly, the inhabitants of Malátíyah used to reside

there in winter, and retire to the gardens of Aspúzi in summer; but Háfiz Páshá having made it his head-quarters, has for many years past occupied the town almost entirely, and the inhabitants have been obliged to remain in Aspúzi, where, in consequence, a bázár has sprung up, and all the comforts and conveniences of a town are to be found, while Malátíyah has sunk into a total state of ruin and wretchedness, although even in Háfiz Páshá's absence, it is still the seat of a Káim-mákám or deputy. Malátíyah has been spoken of by geographers as being in a very cold situation; and at an elevation of 2780 feet. Although not so high as the central plateau of Asia Minor, still the temperature in winter must be low. The constant temperature during our stay of a large and abundant source issuing from limestone rocks, was 55°, probably about the term of the mean annual temperature. It was not, however, on account of the cold that the inhabitants left their summer dwellings, but on account of the heat that they quitted their winter ones. There is scarcely a difference in elevation of 200 feet between Aspúzi and Malátíyah, but the former extending over 6 or 8 miles of territory at the foot of the Bégh Tágh, is subjected to a refined system of irrigation, which appears to have belonged to a remote antiquity, and which has converted what would otherwise have been a barren plain, into verdant and shady gardens. The Turkish inhabitants of Malátíyah are proverbially luxurious, particularly affect very gaudy-coloured clothes, and as the old governor of 'Arká said to us, "Having little money, and still less care, they fill their pipes, and sit by the fountain's side." Háfiz Páshá had also so little gallantry as to say that the ladies of Malátíyah lay under the mulberry trees to let the fruit fall into their mouths. Malátíyah and Aspúzi are both very unhealthy in autumn, when fevers often assume an alarming type. Out of a brigade of 3000 troops as many as 400 were lost in a single autumn. The force of radiation at Aspúzi was 11°. During our stay here, we made excursions to the N.W. to the junction of the Shakmah Szú and the Tokhmah Szú, to the bridge of the latter, and to its junction with the Euphrates, the details of which are laid down in the map.

The meridian of Malátíyah has hitherto been fixed on the maps from that of Someisát. Rennell (vol. i. p. 280) says Someisát is the connecting point between Aleppo and Malátíyah, and the parallel of the latter can be in no other way obtained than by tracing the distance through and from the bend given to the Euphrates hitherto at Someisát, this has led to serious errors in the construction of the maps of this part of Asia Minor. D'Anville considered Malátíyah as placed 1° of lat. in error in the tables of Nasíruddín and of U'lugh Beg. Rennell, however,

who corrected D'Anville's error, in giving to Asia Minor 1° too little in extent N. and S., placed Malátiyah in $38^{\circ} 22'$ N. The lat. of Aspúzí by our observations was $38^{\circ} 23'$. In Mr. Brant's map Malátiyah is in $38^{\circ} 27'$.

Before we quit Malátiyah, it is as well to remark, that two rivers appear to have been confounded under the name of Melas by the ancients: the river which sprung from the side of mount Argæus, 40 stadia, or 4 g. m., 840 yards from Cæsarea, and which by the bursting of its dikes overflowed the lands of the Galatians (unless the latter had a settlement on the Tokhmah Sú), can scarcely have been the latter river, but was rather the Kará Sú; at the same time, however, Strabo (p. 538) decidedly describes the Melas as flowing through Armenia Minor into the Euphrates; and it is generally admitted that the same river gave its name to the Cappadocian province of Melitene, and to the Town, which as a Roman Station, from a camp became a city, and the capital of the province of the same name. It was indeed from this circumstance that D'Anville and Rennell both supposed the Melas to flow through the city of Malátiyah.

On leaving that part of Anti-Taurus which extends W. of the Euphrates, and comparing it with what we had previously observed of the same mountains E. of the same river, it is impossible not to remark, that the ancients have generalised with great sagacity in regarding as a continuous chain that which to all appearance is only a country of mountains. The most careful and accurate observation can but distinguish a few groups, which only when put all together can be considered as Anti-Taurus; but it is to be remarked that these groups are all composed of modern sedimentary deposits, with a few volcanic rocks; and thus by structure and configuration, geologically speaking, constitute the sub-alpine region of Taurus, and thence are properly Anti-Taurus.

The first group eastward of Arjísh is the Khanzír Tágh, which probably does not attain an elevation exceeding 5000 feet. Its direction is from S.W. to N.E., and its extent and width are pretty well defined; but it is continued eastward by low ranges of sand-stone hills, which constitute the Yel Gadugí and Kará Túñúz ranges, rising scarcely 1000 feet above the plains; but between them and the Kızıl Irmák there are other hilly districts, sometimes rocky, and composed of indurated limestone and volcanic rock; at other times undulating, with occasional cliffs composed of sand-stone, red sand, marl, and gypsum. Such are the Sárfchik, the Shema' Tágh, the Abásil-lí hills, &c.

The next easterly group in the Teger Tágh, rising out of a great plain of limestone, watered by the Bálik-lú Sú. This

group is distinguished by some bold isolated mountains, which do not, however, attain any very great elevation; and between this group and the Kará Bel, described in my "*Researches*," is a hilly country of limestones, red sandstone, and gypsum. This part of Anti-Taurus is important, on account of its dividing the waters which flow N. from those which flow S. and E. But south of it there are other and loftier groups: the first and most remarkable of these is the Gók Dellí, or Kóseh Tágh, separated from the Khanzír Tágh by the great limestone plain, which contains the head tributaries of the Seihún. This chain is separated by the valley of the same river from the S.E. offsets of Arjish and the lofty ranges of 'Alí Tágh. To the W. it lowers near Kará Buniár, rises again in the Singulú Tágh, a limestone range of no great elevation, which itself joins with the Baghrán Tágh; the latter breaks into lofty cliffs over the Bálikú Szú, and is prolonged N. of the Tokhmah Szú to the plain of Malátíyah, where low hills of tertiary rock are separated by the river itself from the northerly extensions of the Akjah Tágh, a part of Taurus.

30th.—It was our intention to have proceeded from Malátíyah along the course of the Euphrates, more particularly with a view to exploring the pass of Elegia (Ilijah; called by D'Anville, Pas de Nushar,) but the disturbed state of the Kurds rendered this journey impracticable. They had only lately been attacked in their mountain strongholds in these countries, viz. Kákhtah and Gergen Kal'ah-sí, by the troops of Háfiz Páshá; but this campaign, owing to the abundant resources of the mountaineers, had turned out of little avail, and Kákhtah was still in open rebellion. The Káim-makám, therefore, refused to lend us horses, or to assist us with guides on our expedition. Under these circumstances, in order to render our passage through Mount Taurus as useful to geography as possible, we resolved upon advancing by the pass of Erkenek, and visiting the unexplored districts of Besní and Adeyámán, in order, if possible, to reach the Euphrates at the southern end of the pass, and in the neighbourhood of Gergen Kal'ah-sí.

It was necessary, for this purpose, at first to retrace our steps across the plain, at the foot of the Bághlí-Khánlí Tágh, to near the valley of the Sultán Szú, when we took a more southerly course, crossing over a corner of the mountain range, then entering upon the great valley of Sultán Szú, which separates the Bághlí-Khánlí and Kurd-Yúsuf Tágh from the Akjah Tágh; and after passing along this for about two hours, we turned into a recess in the Bághlí-Khánlí, where we found the village of Gózeneh, and pitched our tent for the evening. By mer. alt. of Júpiter, and alt. of α Polaris,* Gózeneh is in $38^{\circ} 11' N.$

* *Researches in Assyria, Babylonia, and Chaldea.* 8vo. London, 1838.

31st.—Continuing our route up the valley of the Sultán Sú, in a S.S.W. direction, we soon crossed a branch of the river which came from the eastward, from the Kurd-Yúsuf Tágh, in a deep ravine of limestone, reposing upon fine-grained sienite. In this deep valley we passed a caravan of Persians coming from the Hajj, or pilgrimage. Ascending hence, our road lay through a forest of oak, to the point where the plain began to widen near the head of the Sultán Sú and those of the Gók Sú, both tributaries to the Euphrates, but flowing in opposite directions. Upon this plain, at an elevation of 3688 feet, was the ruin of an ancient town, called by the common name of Víráñ Shehr. This town had been encompassed by a double wall on all but the S. side : the walls were very thick, and defended by towers. In the interior is a chapel, in a very simple and unornamental style, 28 feet long by 18 feet 6 inches wide, and an arch of 20 feet semi-circumference. There is also an acropolis and a central mound, now converted into a khán. These ruins belonged to more ancient times than those of the Víráñ-Shehr, at the sources of the Seihún, and were identified by us with the Lacotena, or Lacobena of the Tables, which is evidently the same as the Lavinianesine of Ptolemy (v. 7), which he places to the S. of Melitene, and E. of Cataonia, and consequently, as Rennell remarks, on Mount Taurus. In the subdivision of Cappadocia into ten provinces, by Strabo (pp. 534, 535), Laviniasena is noticed as one; and further on, (p. 540), he mentions a prefecture of Cappadocia, by the name of Laviniasena,* both of which appear to refer to the same district.

In the evening we gained the village Sarghí, situated in a valley, at an elevation of 4030 feet at the southern foot of a group of mountains called Kurú Tágh (Dry Mount), which are a continuation of the Kurd-Yúsuf. There are here no less than twenty-three springs of water issuing from limestone rock, and forming a large and abundant source; there is also another large spring of the same kind at the foot of the hills, about a mile to the W. They all join the Gók Sú, which rises near a village 1 hour to the N.E.; then flows downwards to the S.W. towards the district of Víráñ Shehr, bounded by the hills of Tójik-Góziten and Márso. To the S., however, it winds round these, and making a sudden bend enters into the pass of Erkenek, where it is joined by another rivulet; becoming then a large body of water, it is crossed by a modern bridge in the road to Pelvereh, and another in the road to Tút, and ultimately joins the Euphrates in the westerly bend made by that river between Hoshun and Rúm Kal'ah. To the N. and

* The MSS. both of Strabo and Ptolemy vary much with respect to this name: Laviasena is most favoured by those of the former; Laviniasena, by those of Ptolemy. See Tzs Chucke's note on Strabo, p. 534.—F. S.

N.W. of the valley of the Gók Sú, are the Núr Hakk Tágh, the southern prolongation of the Akjah Tágh; and to the W., the bold group of 'Alí-shehr Tágh, the highest part of Taurus in these districts.

June 1st.—Crossing the valley of the Gók Sú, we ascended the mountain of Gók Tenah, composed of limestone, with the still more lofty Mársó to our right, whose bare precipices and rocky summit with long ridges of snow gave it much of a truly alpine character. From this mountain we descended upon a marshy but fertile plain, extending to the foot of the Tójik Tágh and Ak Tágh, and bearing a tributary to the Gók Sú; thence crossing some low hills we entered upon another plain, and from thence into the pass of Erkenek. This pass exists in what constitutes the most central and linear extent of Taurus in these districts. Starting from the Euphrates by the Ura Bábá, the central chain may be considered as prolonged by the 'Ashúr Tágh above Kákhtah, and the Tójik Tágh and Ak Tágh to above Pelvereh; while the separation of the colossal cliffs of limestone which constitute the Erkenek and Pelvereh mountains, and through which the Gók Sú forces its way, forms the pass called Erkenek. We entered this pass, following what was at once a road and water-course by a rocky glen of limestones; but we soon left the rivulet far below us, till we reached the point where it receives a tributary from the Ak Tágh, at which point are several picturesque mills; then turning round we came to the village of Erkenek, which was formerly a guard-house in the pass, but has rapidly increased in size. The village is beautifully situated at the N. side of the ravine, where the river, continually descending amidst rocks and precipices to the W., finally reaches a varied and boundless mountain scene. Notwithstanding its wild position the village is surrounded by gardens and trees, watered by innumerable springs, and every possible inch of ground is turned to account: it is situated at an elevation of 3828 feet above the sea. The same evening we continued down the valley of the Erkenek river in a S.W. direction; a beautiful fall of water precipitates itself over the limestone cliffs to our right, the river itself being enclosed in a deep glen of the same character till a mile below the village, when it enters upon a district of schistose rocks, covered with a scanty vegetation. We arrived after it was dark near the spot where the Gók Sú joins the river of Erkenek, both flowing to the S.E. through a rocky alpine country, and we had some difficulty in finding a space large enough to pitch our tent.

2nd.—About a mile above the junction of the rivers we crossed the Gók Sú upon a modern bridge of two unequal arches; above it are the ruins of a much older building; from hence we began

to ascend, passing the ruins of an ancient aqueduct covered with a thick coating of travertino; at the summit of the hills vineyards, on a warm chalky soil, led us to the village of Pelvereh, which had been lately abandoned by its inhabitants on account of the oppression to which they considered themselves exposed by travellers to and from Malátiyah and the army of Háfiz Páshá. The ancient Perre, which is undoubtedly the same as the modern Pelverreh, was remarkable as being a connecting point, in the Antonine Itinerary, between the routes from Cappadocia, Mesopotamia, the lesser Armenia, and Syria, as it still is in the present day a point of union of roads from Bír, Somcisát, Aleppo, and El Bostán. Hence, from these circumstances, the existence of a pass through Taurus in this part was conjectured by Rennell to exist. We were to have changed horses at this village, but as there were no inhabitants no alternative remained but to take what we had on to Besní: the road became less mountainous and vegetation more varied as we travelled in a southerly direction round the foot of Khurkhun, a nearly isolated conical mountain of ophiolite and steaschist, from whence we descended to the valley of Ak Dereh, at the southern foot of the Ak Tágh, and containing a tributary to the Euphrates; a long ascent up the Hamiyayan hills, and a less tedious descent to the S., led us to Besní, now a small town with a ruined castle, and the site of the ancient Nisus.

To our left, or S.W., on quitting Pelvereh, and supplied by springs which descend from that place and from the adjacent hills, are three small and prettily-situated lakes which communicate with one another, and thence supply a common stream, which flows by a valley passed on a former journey from Mar'ash to Rúm-Kal'ah, and constitutes the easterly source of the Jaihán, the main branch of which it joins in the valley below Mar'ash.

3rd.—Besní lies in a narrow limestone glen, without gardens or trees in the town, and thus pent up, is hot and unhealthy in summer, when the inhabitants retire to their vineyards and country houses. The castle is in a very ruinous condition, and stands on the summit of a cliff, which is nearly surrounded by the buildings of the town. Besní contains 2500 houses of Mohammedans and 250 of Armenians, with a tolerable bázár, but provisions were uncommonly scarce, on account of the demands of the military, and we had to pay 3 piastres, equal to $7\frac{1}{2}d.$, for a cake of bread, in England worth a penny. Besní stands in $37^{\circ} 42' N.$, and at an elevation of 2340 feet; the rivulet flows down the ravine to S. by W. The crest of the Hamiyayan hills has by barometer an elevation of 3160 feet.

4th.—Started from Besní, passing round the town to the N., crossing a bridge by the Mutesellim's house, and then turned E.

by a village of weavers over a hill of limestone, with cones, pectens, &c., and covered with vineyards and country houses. The valley of Ak Dereh, well-cultivated and full of villages, lay below us to our left; while the valley of Hisn Ayás-sí to our right, separated us from the hilly country above the 'Arabah Ováh-sí.

The valley of Ak Dereh, at first extending W. and E. to Terbesak, at this last place turns S.E. to join the Euphrates. We forded it a little below this bend about 7 miles from Besní, and then ascended by the Kurd village of Al-mánlí, to a rocky country, rendered verdant, however, by many beautiful vineyards, but terminating to the N.E. in bold precipices over the valley of the Gók Sú. The ride to-day was altogether through a beautiful and fertile country, and we spent the night in a grove near the village of Shám-búlák, which was full of birds, that made the valley resound with their varied song. As with us, the nightingale bore away the palm, and it had the advantage here of singing all the evening as well as by night.

5th.—About an hour from Shám-búlák we came to the valley of the Gók Sú, which was here divided into three branches. Notwithstanding this we had great difficulty in fording the river, which was both rapid and deep. On the left bank was Bur-Kónák, a village with a neighbouring ruin, said to be that of a Khán; above were the tents of the Kóchánlí tribe of Kurds; our road hence lay over nearly level grassy plains, well watered by rivulets, and extending from the foot of Ak Tágh and Tójik Tágh to the Euphrates. After a journey of 7 hours we arrived at the town of Adiyamán, which we ascertained from existing traditions to be the same as the Hisn Mansúr of Idrísí, and also probably the Carbanum of the itineraries.

Adiyamán is a small town nearly circularly disposed round a mound called the Castle Hill. It is surrounded by gardens and groves, and contains 800 houses of Mohammedans and 300 of Christians. It has several mosques, three ruinous kháns, and one bath. On an adjacent hill are the tombs of two celebrated men, Mahmúd el Ansári and Ibn Zaïr Ansári. Lat. by Spica Virginis and Polaris, $37^{\circ} 46'$. Elevation 2700 feet.

6th.—Our road lay through a country of the same character as yesterday, only with deeper valleys and larger rivulets. Six miles from Adiyamán we passed Kárá U'yúk (Black Mound), thence over alternate plains and valleys, always along the foot of Mount Taurus, we passed many villages of Kurds, who now constituted the whole of the population, till we arrived at the village of Kerkunah, or Kerkun Bózúk, where we pitched our tent in a small orchard of apricot trees. The Kurds sought to pick a quarrel with us in the evening, and even got to handcuffs with

our servants, but we managed to quiet them; notwithstanding which, when it was dark and impossible to start, they came and told us we had no right to have our tent in the orchard and must decamp immediately; their object in this was too plain to be misunderstood, and was therefore peremptorily refused. We ultimately obliged them to give us a guard from their own village to watch over our things. Kerkunah, by mer. alt. of Spica Virginis, is in lat. $37^{\circ} 42' 20''$ N.

7th.—Left Kerkunah early, and travelling to the N.E. passed Karájúrán, a small village, then Kharík, where we descended by a ravine in chalk, beneath sandstone, clothed with wild fig-trees, mulberries, and the refreshing Judas tree (*Cercis siliquastrum*). At the base we reached the river of Kákhtah, the waters of which were anciently carried to the capital of Commagena, by aqueducts running parallel to the Euphrates. We experienced no trouble in fording the river, which formed several branches, and ascended by an orchard of pomegranate and mulberry trees, of which there were many along the banks of the river, at a distance from any house. There is also an infinite number of sparrows, which here, though unused to see men, immediately become social. We arrived early in the afternoon at Tókáríz, a village of a Kurdish Bóyah Beg; in the evening the chief paid us a visit in our tent, he was very suspicious, and our open plain statement regarding the objects of our journey did not satisfy him. He examined our things closely, and appeared to think that if there were a general division of them, he would take care to come in for his share. In the evening there was a robbery committed close to us; a party of the villagers armed themselves and turned out, but finding that the people robbed did not belong to them, they returned without interfering.

Tókáríz is but a small village of about sixty houses, most of which are enclosed in a kind of quadrangular fort. Its lat. by mean of mer. alt. of Spica Virginis, and alt. of Polaris, is $37^{\circ} 46' 20''$ N. Elevation 2015 feet, and not above 5 miles in a direct line from the Euphrates.

8th.—On leaving Tókáríz we began again to approach Mount Taurus in a N.E. direction, our object being to reach Gergen Kal'eh-sí, which was at the exit of the Euphrates from the mountains. Kákhtah was only 3 hours off, and possessed a castellated relic, but it was impossible to visit it as the Kurds were in open rebellion. We could not get a guide for our road, but travelled from village to village, passing Tornedah, a village situated on the two sides of a ravine, with a rivulet flowing S.E., and soon gaining the gravelly country of the Euphrates, with several villages and cultivation, succeeded by a district of basanites, from which we descended into a deep valley adjacent to the Euphrates, called

Chámúní. We ascended hence a steep limestone-hill, and following a rocky path, reached Oldish, a village of eighty houses, with gardens and orchards, inhabited by Armenians and Kurds. The costume of the latter was very picturesque, all wearing a waistcoat of brown felt, with cartridge pouch of the same colour. No adult went out without his gun. Following a rude path on the side of a limestone declivity, we reached a narrow pass, with pinnacles of limestone on one side, and remarkably curved strata on the other, and this led us into the valley of Gergen. There were remains of two square buildings, and of a wall which formerly defended this pass; a quarter of an hour's ride along the foot of the cliff led us to the village of Gergen, peering over which and advancing on a bold rock over the Euphrates was the castle of the same name.

9th.—The modern town of Gergen, although the seat of a Mutesellim, is only a small place, containing about 100 houses, and there are thirty more in the castle. The chief population is composed of Kurd mountaineers of the tribes of Julerlí, Durgánlí and Murdeslí; but there were also a few quiet, devout Turks, besides twenty houses of Armenians in the town and five in the castle. This small congregation has a priest and a church. The Mutesellim was then with the Ser-'Asker's army, and his representative made it a point of telling us on our arrival, that the Kurds could not be kept in subjection, that he had no command over them, and requested that we would not pitch our tent far from the town, as otherwise he could not be answerable for robberies.

Early in the morning we visited the castle, an interesting remnant of antiquity: the castle-hill is separated from adjacent cliffs by an excavated way 21 feet deep and 41 feet wide; this is crossed by a wooden bridge, supported by central square pillars. The gateway is rather handsome, but of Saracenic architecture, with an Arabic inscription over the portal: it leads into a covered way with three arches, extending 25 feet, and then by an open way along the side of a rock 100 paces to a second gate. Here the passage is cut out of solid rock, in which there is a recess like a frame, which may have contained a statue or head in bas-relief, but now totally effaced; round this frame is a long inscription in Byzantine Greek letters, of which only a few words here and there remain legible. Beyond this we entered upon that part of the fort which contains the houses, and which is in a more dismantled condition. On the highest part of the rock there is a mass of solid stone-masonry; there was also in the castle three small pieces of ordinance of curious workmanship which belonged to the period of Arab domination. Gergen Kal'eh-sí has been

identified with Juliopolis, but it has evidently often changed masters, and appears to have been as long a place of resort for the Arabs of the Euphrates, as it has been a retreat to the restless Kurdish mountaineers. It was very remarkable that the Commander of such an army as the Ser-'Asker's should leave in his rear such points of retreat and defence as Kákhtah and Gergen unsubdued or unprotected.

The view from the castle is one of great beauty, and in one direction, that of the plain of Síverck, very extensive, being only limited by the Karájah Tágh to the E., and extending beyond the reach of vision to the S. The great slope of the Kurdish district of Tókáríz towards the Euphrates, is however for the most part hid by limestone cliffs. To the N., N.E., and N.W., is varied mountain scenery, amid which the rocky pass of Kákhtah, the high conical mountain of 'Ashúr, the bold mountain ridges, all limestone, of Kizil Yabán, Sarabún and Haserán, and still more the remarkable cone called Ura Bábá, form the principal features; but the most attractive objects are the green adjoining vallies and the rich sloping hills, in districts supposed to be almost uninhabited, but where villages are met with, and cultivation is extended in almost every direction. The Euphrates sweeping round through Mount Taurus a few miles above Díriskó, attains at that point its most easterly curve, rolls over rapids immediately above the village so named, and then turning again below the cliff of the castle of Gergen, passes through a very narrow gorge above 400 feet in depth, of which one-third is formed by nearly perpendicular cliffs: from this it emerges below the valley of Chámúní, and its banks become for a time productive and luxuriant. The valley of Gergen, wider and more cultivated than that of Chámúní, boasts of two villages besides the town: the chief rivulet that supplies it with water, comes from the rocky Kakishur Kebbán, while another stream rolls like a white sheet over the declivities of the Sarabún. The adjacent valley of the Euphrates contains the two villages of Díriskó, and two smaller ones of Panduri at the foot of the castle. The summits of the mountains around are, for the most part, bold, rocky, and barren, the declivities are also rocky and uneven, but well wooded, with much breadth and depth of shadow. The whole effect is one of dark mountain scenery, with occasional glimpses of light from winding rivers, white cliffs, smiling villages, crops and vineyards, which still belong in this, as in almost all towns, rather to a sub-alpine than to a mountainous region of the first order.

The well-known statement of Pomponius Mela (lib. iii. ch. 13) “*ni obstet Taurus, in nostra maria venturus*,” which is introduced into all notices of the Euphrates, as referring to the non-existing

bend or elbow of that river at Samosata, may now, that the knowledge of the course and windings of the Euphrates has been so much improved, be made to apply to either of the most westerly curves of that river, the one occurring near Malátiyah, the other at Rúm-Kal'ah. The most weighty arguments are in favour of the first and principal curve which takes place before the river enters Mount Taurus, that at Rumkal'ah being south of the mountainous district. Pliny (lib. v. ch. 24) says, "*Apud Elegiam occurrit illi Taurus mons.*" Elegia is represented by the modern I'z O'ghlú, and it is there that the Euphrates after issuing from the mountains of Kebbán Ma'den, and having turned to the west round the remarkable peninsula of 'Abdu-l-Wahháb, terminated by the rocks of Munshár (D'Anville's Pass of Nushar); receives the Tokhmah Sú, and then takes an easterly bend to pass the rocky mountains of Bághlí Khánlí and Beg Tágh. To the E., however, the obstacles met with by the river do not assume a formidable character till the Mount of Sarim-chám or Da'wah Bógház, the structure of which is described in the "Researches," approach the river, and hence it is between them and the limestone mountains of Beg Tágh, that the first rapids of the Euphrates, which are only two, occur. The second obstacles, marked also by two rapids, occur at the meeting of the Shiró Tágh, so named from a village in the mountainous district W. of the Euphrates, and the Azarak (Azrák) Tágh, in the declivities of which lie the north-western sources of the Tigris. Immediately below these rapids the river can be crossed on rafts, and with the exception of another small rapid, it then flows on without interruption, nearly to Gergen kal'eh-sí, above which, as mentioned before, there is a single rapid, noticed by the ancients as being above Samosata, but I could not trace any existence of it at present. Before we arrived at Rúm-Kal'ah, besides many smaller ones, the river makes two large bends, the one in a westerly, the other in a southerly direction, and the last is caused by a huge hill of limestone near Jemjemeh. Below this there is a ferry, a little beyond which the river enters into the massive limestone district of Rúm Kal'ah, by which it is finally turned into its ultimate south-easterly direction. This last circumstance is almost the only one in favour of the supposition that this westerly bend is that alluded to by the ancients as preventing the Euphrates from joining the Mediterranean, but we must also consider that the extreme easterly origin ascertained by this expedition, to belong to one of the sources of the Pyramus, also places the Euphrates to the N. of Taurus, in a position which would allow a writer to say "*ni obstet Taurus, in nostra maria venturus.*" Modern geographers knew that neither the hills of Samosata nor those of Rúm-Kal'ah, were Taurus,

and hence D'Anville (*Euphrate et Tigre*, p. 7) says, that the Taurus of Pomponius Mela, is Amanus, but Amanus has no existence W. of Gaur Tâgh. It appears, however, that Pliny also considered the hills at Rûm-Kal'ah as 'Amanus, for he says Samosata stands at that remarkable bend, in the course of the Euphrates, where, after its emancipation from the skirts of Taurus, it first points towards the gulf of Issus, but the roots of Amanus turn it aside from the Mediterranean towards the Persian Gulf. This, it is to be observed, is the second repulse the river meets with according to his own account: the first on entering Taurus, the second at the roots of Amanus.

The whole time of our stay at Gergen Kal'eh-sí was occupied in endeavours to keep the Kurds in good humour: they insulted us, and sneered at us, which is a rare thing, even in the interior of our tent, but forbearance prevailed; and after undergoing a long trial of temper and patience, during which we many times nearly came to open war, we got mules and started with a party of mountaineers, who, as they were luckily going on business as far as Bîr, did not dare to carry their guns with them, a circumstance which rendered them much less impudent and obtrusive, but did not entirely quiet their strange tempers. Before I leave Gergen Kal'eh-sí, it is well to remark, that in the valley the lower beds consist of red sandstone and sandstone conglomerate, supporting limestone, with pectens, cones, madreporites, &c. The strata dip in opposite directions, at the two sides of the valley. The elevation of the town is 2724 feet; and the latitude by mer. alt. of the sun and of Spica Virginis, $37^{\circ} 56' 30''$ N.

10th.—The valley of Gergen Kal'eh-sí, except in proceeding N., has only one entrance; and descending due S. from this, we reached the borders of the deep limestone glen, previously noticed, and named Hadró: the road winds down the side of the precipice, and becomes, in some parts, a mere staircase. As there is but one small raft on skins, the whole of the afternoon was occupied in ferrying over; after which we repaired for the night to the village of Masró, where we were quite delighted to find the inhabitants quiet agricultural labourers.

11th.—Our road now lay in a south-westerly direction, parallel to the general course of the Euphrates, the river flowing through hills of trap. Passing Hadró, with groves and gardens, we came, after 3 hours' ride, to the banks of a small river, full of fish, called Zengibár (Negroes), which, before it joins the Euphrates, forms a large muddy pond, abounding in *Trionyx Euphratica*, which I had not observed anywhere farther N. Below this point there are some small rapids in the Euphrates: after travelling 2 more hours over a dark country we came to a

larger tributary, called Chám Chái (Fir-river), flowing slowly through a deep ravine of chalk. Passing this we came, in 2 hours more, to a ravine with a small rivulet, and numerous excavated caves, some of them of large dimensions. At the head of this ravine was the village of Hoshun, with about fifty houses, situated upon a tel or tepeh (hill or mound); and by an alt. of α Polaris, in lat. $37^{\circ} 37' 20''$ N.

12th.—We had now to travel over a country very little cultivated. There were several small villages on the banks of the Euphrates, which is joined, at a short distance below Hoshun, by the three mouths of the Kákhtah river, which form a delta. From hence to Someisát the remains of an aqueduct, which carried the water of the Kákhtah river to that place, are every now and then visible. Its lofty arches, supported either by strong walls or piers, must have been a work of some importance. As we had reason, from the neighbourhood of the army, to suppose that Someisát would be partly abandoned, we stopped at the small village of Ledar, a short distance to the N. of the town; and by alt. of α Polaris in $37^{\circ} 34'$ N.

13th.—When we passed by Kantarah, the village opposite to Someisát, we found it, as we expected, deserted: after 5 hours' slow ride, we left the banks of the river, near the bend of Jesujuneh, and, ascending low chalk hills covered with gravel, passed the village of Yásinjah, where we observed many flocks of rose-coloured thrushes (*Turdus roseus*), the Seleucidæ of Pliny, and arrived for the evening at Yailásh (seat of a bóyah-beg), a village built round an antique-looking tel or tepeh. The surrounding country is well cultivated; but there is a want of water, which at the village is obtained from wells. By position and distance, this would appear to correspond with the ancient Porsica, which we had been looking out for since we left the banks of the river, already surveyed from Bír to Someisát, by Lieut. Lynch, I.N. Yailásh, by alt. of α Polaris, is in $37^{\circ} 23'$ N.

14th.—Travelling over the plain as before, we approached some low limestone hills, with rude houses built with stones, which had formerly belonged to edifices of some pretensions, both as regarded size and ornament: these were scattered about in three groups, about $\frac{1}{2}$ mile from one another; the central group was the largest, and contained the remains of two churches, still in a good state of preservation, having been solidly built, after the fashion of the Greek churches at Mal-Agob, with bold semicircular arches, and roof of large slabs of stone. These churches evidently belonged, however, to a Syrian community; for the altars were level with the floors; whereas in the Armenian churches they are raised, and in the Greek are placed in a sanctuary.

Accompanying these ruins were some curious cavities, hewn in the solid rock, in the form of a pear, the base varying from 8 feet to 12 feet in diameter, and the depth from 12 feet to 20 feet, or upwards; but the aperture is small and round, and generally covered up with one, or, at the most, two great stones. They are coated in the inside with mortar; and some of them being broken down, are used as stables for mules; others are filled with tubu or chopped straw, the usual food for horses. These cavities have been supposed to be tombs; and their proximity to the church appears to favour such a supposition; but they may also have been repositories for corn or water. The mortared walls favour the supposition; but the first is rendered most probable by the circumstance of cavities of a similar nature, but less carefully constructed, being still in use in many parts of Syria and Asia Minor for the same purposes. This spot is now called U'ch-Kilísá (the Three Churches); and there are still the houses of a few poor farmers in the neighbourhood.

A little beyond this we came to some more ruins: a single wall with two windows was all that remained of the church of this village. The soil was now formed of indurated chalk, appearing often on the surface, like a rude but nearly level rocky pavement, at times covered with a slender vegetation of grass. The outline of the country was undulating; but there was an almost continuous barrenness, and a total want of water. In this inhospitable district we were constantly meeting with ruins of early Christianity, ecclesiastical or monastic edifices, often of great beauty; remains of large villages, with deep cisterns or reservoirs hewn out of the solid rock; arches isolated on some lone rocky summit; or fountains deserted and broken up. We were evidently passing through an interesting district, as being the seat of one of the early Christian communities in these countries; and it was impossible to travel through such a scene without asking oneself, was it from fear of prosecution, to avoid jealousy or envy, or still more probably to practise the severe exercises and austere self-denial which sprang from a then young but ardent devotion, that here, as in the Syrian hills of Reihá and Edlîb, and amid the rocks of Sheïkh Baráket, or Mount St. Simeon, the early Christians retreated into stony and sterile districts, without shade from the sun, and even without spring-water to quench a summer's thirst.

We pitched our tent in the evening in the gardens 1 hour to the N. of Bîr, as we expected the town to be crowded: the tents of the Ser'asker's troops extended along the opposite banks of the Euphrates. Our position was in $37^{\circ} 3' 45''$ N. We suffered in this place from dust and flies; so much so that we could hardly get on with our work.

15th.—Crossing the Euphrates, we rode to the village of Nizib,* where Háfiz Páshá was encamped with his troops. This village, situated in N. lat. $37^{\circ} 1' 15''$, and nearly due W. $7\frac{1}{2}$ miles from Bír, is at the foot of a range of limestone hills, which extend E. and W. from the banks of the Euphrates, near Tel Balkís, to beyond the meridian of Aïn-táb : a rivulet flows here from a long valley in this low range of hills, which it fertilises in its progress, joining the river of Kezrín,† about $1\frac{1}{2}$ mile below the village. The soil presents a nearly uniform level at the foot of the hills, sinking only gradually towards the river, when it is cut into deep ravines. Between the hills and the valley are many groves of olives and fig-trees. Háfiz Páshá had at first entrenched himself in a camp on the heights, immediately above the river, on the right bank, and opposite Bír ; but had subsequently removed to the pleasanter valley of Nizib, where his camp was only fortified to the right, or the W. and S.W. The general was delighted to see us ; but when we mentioned the object of our visit, to obtain a fermán, and a khaváss, for the district of Sinjár, his tone altered very much. These countries had shown many symptoms of dissatisfaction at levies lately made for provender, &c., for the army ; he therefore thought we had better delay a little. We then proposed to proceed by Nišíbín ; and, after further conversation, he terminated by urging, in a manner that could not be refused, that we would spend two or three days with him in the camp. 'Alí Beg, a colonel of irregular troops, was sent back with us to Bír ; and so fearful were they of our disappointing the general, that we were much pressed to spend the night at the governor's house at that place. The next morning, on our arrival at the camp, we found a large and showy tent, with a numerous retinue of servants, placed at our disposal, and our table was served from the Páshá's kitchen.

On Thursday, June 20th, the Egyptian army made its appearance, having driven before it the advanced guard of the Turks, and captured several guns and tents. On Friday, the 21st, Ibráhím Páshá reconnoitred the position of the Turks, which led to a small engagement between the out-posts, and afterwards to a more serious demonstration. Saturday, the 22nd, the Egyptians commenced their march along the right bank of the Keún ; and, Sunday, the 23rd, had crossed that river, and occupied a position close to our camp, by which, with a short march further, they were enabled to command the whole of our left. Háfiz Páshá was at this conjuncture recommended, by the Prussian staff-officers

* Nezeb in Rousseau's, and Nízeib in Drummond's map.—F.S

† Kárzún (Rousseau).

at that time in his service, to attack the Egyptians in their present position, or to retire to Bír. We also made a last attempt to obtain even a težkereh to enable us to leave the camp. I represented the necessity of my moving, not so much on my own account, as for the safety of my instruments. "If you are not safe here," answered the Páshá, "when will you be safe? Have you so little confidence in our success?" To this I answered, if he would only let me send my luggage to Bír, I would willingly stop with him myself. After some hesitation the general promised he would start with me at midnight. I had, however, scarcely imparted his last determination to the Prussian officers when a Múllah interfered: the Páshá altered his intention, and resolved upon giving battle the ensuing morning: at midnight the camp of the Egyptians was canonaded and thrown into disorder; but the Múllahs also prevented any advantage being taken of this.

24th.—The two armies came into collision; that of the Egyptians, with irregular troops, was 34,300 strong, according to the reports that could be most relied upon, with 110 guns; that of the Turks 33,200, with 160 guns. There were also on the side of the Turks two battalions of Egyptians, that had surrendered at the taking of 'Aïn-táb, besides many deserters. Three regiments of Turkish cavalry remained inactive during the conflict. The Egyptian prisoners and deserters gave way at once, and the Báshi Bózúk, or irregular troops, to whom was left the support of the extreme left, repaired, soon after the commencement of the engagement, to the camp, where, tearing to pieces the tent in which it was known that the treasury was deposited, they endeavoured to secure whatever was in their power. The Egyptians, in the mean time, meeting with no opposition, had advanced along the foot of the hills, and, taking possession of the village of Nizib, and the head of the camp, opened a fire upon the line of fugitives and troops along its whole extent. Notwithstanding all these disadvantages, the main body of the 'Osmánlis fought with great courage, and the battle remained some time undecided, till the misfortunes entailed at first drew the remainder into disorder, and flight became general.

Early in the morning we had endeavoured to secure horses sufficient to carry off our baggage in case of misadventure, and while Mr. Russell and myself rode out to see the progress of events, Mr. Rassám was to superintend, if possible, their starting. In this, however, he was opposed by the Turkish troops, who, on his trying to escape, surrounded him with their bayonets, and finally, on the plundering irruption of the Báshi Bózúk, he was obliged to make his escape, with only a servant, who carried two

small bags. The very early period of the engagement, at which the Egyptians planted their guns, and opened a raking fire close to our tent, prevented Mr. Russell and myself from ever regaining it, notwithstanding many attempts, in which we were also much impeded by fugitives and retreating artillery. My maps and papers I had luckily secured about my person, and the sextant and Kater's amplitude and altitude-instrument had been packed upon a spare horse, upon which a servant was, in case of emergency, to effect his retreat. We thus commenced our retreat apart from one another, our arrangements having been previously made that we should meet at 'Ain-táb. It was, however, near sunset, when following the dense crowd of fugitives, that the ruined towers of Rúm-Kal'ah, only a few miles to our right, warned me that we were upon a wrong road. We then became alarmed for the safety of Mr. Rassám, and resolved upon running the chance of finding our way across the country. We had not, however, left the main body a quarter of an hour, before we found ourselves at hand with five armed Kurds, who were very vociferous in demanding where we were going. Being thus caught off the road, we thought that they took us for deserters, trying to join Ibráhím Páshá, and having entered into a colloquy, we foolishly got off our horses to show our fermán, which was a signal for a commencement of robbery, in which they obtained possession of my watch, and from Mr. Russell of his chronometer. They then hesitated a moment how to proceed, during which Mr. Russell, having stolen round his horse, secured his gun, and had it pointed at one of the robbers, and by a nearly simultaneous movement I had mounted mine, and secured my pistols; the consequence was, that we obliged them to restore our watches, and even to pick up some papers which had fallen during the discussion. We, however, gave up the idea of crossing the country, and rejoined the main body of the army, with whom we continued our retreat, passing a rocky ravine of limestone about 400 feet in depth, down the sides of which the road was the most precipitous and difficult I had ever seen a body of men, still less loaded horses, attempt, and entailed the most curious scene of disasters and fallings over that can be well imagined. After dark, we reached another ravine of a nearly similar character, where, having divided a small crust given to us by a soldier, for we had not broken fast all day, Mr. Russell and myself slept by our horses, under the shelter of a noble plane-tree. It may be remarked here, that in the course of the day's journey we found basanites cropping out in the great uplands of indurated limestone of Rúm-Kal'ah, a circumstance which does not occur nearer to the Euphrates.

26th.—We continued our retreat, ascending steep precipices to

the valley of 'Arabán Ovahsí. The natives of the numerous villages in this fertile valley had armed themselves against the Turks, who offered no violence nor harm to their habitations; but, dividing themselves into two parties, the infantry by a well-sustained firing cleared the rocks, while the horsemen united against the bodies in the plain. The firing of both parties was, however, very harmless. Passing over a long steril limestone country, where many broke down from mere thirst, we reached a small river, crossed by a very antique-looking and ruinous bridge, which was what I had often asked for in these countries, the Pons Singæ of the Tables. Here, by accident or otherwise, two corn-fields caught fire, which spread with fearful rapidity; we passed many villages on our road hence, feeding our horses occasionally in the corn-fields by the road-side, for we had no alternative, they would not give or sell corn, or a piece of bread at the villages, and our safety depended upon our steeds. We stopped again two hours, from 11 to 1, and slept a little, arriving at Besní at 3 o'clock in the morning. When daylight cast its early glare upon the singular groups sleeping in the streets, on the roofs, or by the fountains, or collected in the houses, bázárs, and mosques; it was a scene never to be forgotten, but to us particularly delightful, for here we found Mr. Rassám in good health, and afterwards a servant with the instruments; but the other, who had in charge Mr. Rassám's desk, with a chronometer and a small sum of money, was, from what was afterwards heard, robbed and stripped near Rúm-Kal'ah. Many already began to arrive in this latter condition, and one European *medicus*, little accustomed to trudge it on foot in hot countries, had lost his horse and all his clothes, by unwarily getting himself among a party of Báshi Bózük, actually in the main line of retreat. Some attempt at reorganization was made at Besní, by Sa'du-llah Páshá, second in command; orders were given not to leave the town, but to collect together for the morrow, and we thus gained some rest, and started in a stronger body.

27th.—On passing the foot of Mount Khurkhun, a sharp irregular firing from above brought many a hundred muskets to bear upon the spot, and soon dislodged a party of Kurds. We stopped a few moments at Pervereh, and the same night reached Erkenek, where we obtained some food.

28th.—Crossing the Gók Tenah, where we passed the body of an Armenian killed by the Kurds, we proceeded by Şarghí to the sources of the Sultán Sú, where we found fourteen guns that had been sent as a reinforcement; these we took back with us, stopping the night at Gózchench, or Góz Khánah, and reached Aspúzí next day.

29th.—We found Háfiz Páshá had also arrived at this place by another mountain road, along which he had been subjected to very great annoyance from the Kurds. We at once requested a težkereh for Sámshún, to which, when granted, was added the polite offer of a Tátár. We intended to start by break of day, but the Páshá insisted upon seeing us before our departure. He did not sleep, he said. We accordingly waited upon him at 3 A.M. next morning, and found him already up. His brother, Ibráil Páshá, had been weeping during the night. It was almost with difficulty that we got away from our distressed friend, and we only got that morning to Malátiyah, having had to send a message back for a guard, as the road to Sívás, by Deliklí Tásh, was shut up by the Reshván Kurds. Luckily, the mutesellim of 'Arab-Keil (Kír), who had come to satisfy the inhabitants of his district that Háfiz Páshá was still alive by his personal report, was about to return that evening, so we resolved upon altering our road, and started soon after dark, with a guard of about thirty men, over the bridge of the Tokhmah-Sú, and by the banks of the Euphrates, sleeping a few hours at Mor Hamám, where the inhabitants boasted of having themselves captured seventeen Kurds that day.

July 3rd.—We arrived at 'Arab-Keil (Kír) early this morning and feasted upon fried eggs, mulberries, and sour milk. What a change had come over our circumstances, when a few days ago a bit of bread would have almost tempted us to robbery! The only drawback was the health of the party. The hot rays of the sun had been unrefreshed by any breeze for two days; both Mr. Russell and the Tátár were completely knocked up. Our horses had also suffered severely, and had mostly sore backs or abscesses. A guard was given us to Dívrígí, which we reached by a road different from that by which I had formerly travelled, and which presented me with some new geological features, more particularly an extensive trachytic tract.

We stopped a day at Sívás, in lat. $39^{\circ} 44'$ N., and arrived on Monday, *July 15th*, at Sámshún. Here we found one of the steam-boats had had an accident, and the others upon the same station had not been here for some time. Much anxiety prevailed in the town, to which many Europeans had repaired from the interior, on account of the alarm produced by the death of the Sultán, and the defeat of the Turkish army. There had also been several cases of plague in the town, which malady had been brought by a Circassian vessel. Under these circumstances, we resolved upon not waiting the chance of a steam-boat, but to continue our journey by land; we accordingly the same evening retraced our steps through the beautiful but muddy forests that clothe the shores of Paphlagonia, and, sleeping near a spring, next day

reached Gerzeh, formerly a bathing-place of much repute, but all the ruins at present existing are of the Mohammedan æra.

At Merzeván we regained the great road, which we found to our surprise to be crowded with a vagabond and undisciplined soldiery, the remains of the army of Zāid Mōhammed Páshá of Angora, which, after robbing the treasury, had, upon the news of Háfiz Páshá's defeat, broken up into separate parties, now on their way to Za'ferán-Bólí, Kastamúní, Bólí, &c. We had the greatest difficulty in keeping peace with these disorderly troops, and one Tátár deserted us during the night-time. We, however, got through with safety, and on the 28th July arrived at Constantinople.









ASIA MINOR & ARMENIA,

to illustrate routes of

M^R. AINSWORTH, M^R. BRANT,

M^R SUTER, &

LORD POLLINGTON.

1840.

The eastern portion of the Map, from observations by

M.A.G. Glascott, R.N.

